Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
Implementation of Section 309(j)	)	
of the Communications Act	)	PP Docket No. 93-253
Competitive Bidding	)	
	)	

REPLY COMMENTS OF BELL ATLANTIC PERSONAL COMMUNICATIONS, INC.

Gary M. Epstein
Nicholas W. Allard
James H. Barker
LATHAM & WATKINS
Suite 1300
1001 Pennsylvania Ave., N.W.
Washington, D.C. 20004-2505
(202) 637-2200

William L. Roughton
of Counsel
for Bell Atlantic Personal Communications, Inc.

November 30, 1993

TABLE OF CONTENTS

EXECUTIVE SUMMARY

In its initial Comments in this proceeding, Bell Atlantic presented several proposals and auction design modifications intended to aid the Commission in the implementation of its recently-acquired competitive bidding authority under new Section 309(j) to the Communications Act.

In the following Reply Comments, Bell Atlantic first urges the Commission once again to maximize the participation of all qualified bidders in the PCS auctions, and in particular, to allow entities that might otherwise be restricted by the Commission's current PCS cellular eligibility rules and attribution thresholds to enter the auction process, conditioned on their achieving compliance with the Commission's PCS service rules within a specified "grace period." Such an approach will maximize auction competition and promote the Commission's fundamental objective of assigning PCS licenses to their highest valued use, while also providing cellular operators with the ability and incentive to transition their extensive wireless communications expertise into the development of PCS systems.

Bell Atlantic also addresses specific design issues raised in some of the more substantive auction proposals. While Bell Atlantic's proposed auction design used the Commission's regime as a baseline to propose several ways for the Commission to simplify the PCS auctions, other parties also presented proposals for the Commission to consider. What has emerged thus far is a rather complex auction design "decision tree" which Professors Nalebuff and Bulow have summarized and used as a springboard to address major design issues that have emerged from the first round of comments, and to offer refinements to Bell Atlantic's auction proposal. The supplemental comments of Professors Nalebuff and Bulow are attached to Bell Atlantic's Reply Comments.

All auction design proposals involve tradeoffs and imperfections. Bell Atlantic continues to urge the Commission to adopt an auction design that retains theoretical advantages, but can be simply and practically implemented from an administrative standpoint. After considering several of the more detailed simultaneous auction proposals, Bell Atlantic has concluded that the Commission and the public would be best served by retaining a sequential auction approach and taking only limited steps towards simultaneous bidding in the manner that Bell Atlantic has proposed.

Bell Atlantic also reiterates its support for the limited nationwide combinatorial bidding the Commission has proposed. The Commission's basic plan will allow the PCS market directly and fully to express the interdependence of license values, and if the marketplace desires it, to aggregate licenses to achieve their highest valued use. Nevertheless, Bell Atlantic has grave concerns that the goal of the proposal will be turned on its head, and the benefits to consumers will vanish, if the Commission adopts some of the more self-serving suggestions offered in the first round of comments. MCI, in particular, has proposed rule changes that would virtually guarantee it, and almost no one else, the opportunity to obtain a nationwide PCS system through the auction process. The public interest in permitting nationwide aggregation through the auction process will be defeated

entirely if the pool of potential nationwide PCS applicants is effectively and artificially limited to a tiny number of bidders.

Bell Atlantic again urges the Commission to promote the participation of designated entities in the PCS auctions by encouraging strategic alliances between such entities and experienced telecommunications providers, including cellular-affiliated entities. Specifically, the Commission can promote this goal at the very least by waiving its present cellular eligibility and attribution thresholds for the specific purpose of encouraging the formation of consortiums that offer meaningful equity participation to designated entities.to exclude any qualified participant from the auction process ex ante. It is overwhelmingly in the public interest for the Commission to allow all qualified entities to bid for PCS licenses, provided that they pledge to bring their systems into compliance with the PCS service rules within a specified time frame. This will benefit consumers by allowing all firms the opportunity to realize the possibility of PCS, and will ultimately ensure the most efficient allocation of PCS licenses.

Finally, Bell Atlantic reiterates its support for the Commission's decision to resolve via auctions a large number of mutually exclusive cellular unserved area applications filed prior to July 26, 1993, and also supports the virtually uniform opposition offered in the first round of comments to licensing intermediate links by competitive bidding procedures.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
Implementation of Section 309(j)	)	
of the Communications Act	)	PP Docket No. 93-253
Competitive Bidding	)	
	)	
	)	

REPLY COMMENTS OF BELL ATLANTIC PERSONAL COMMUNICATIONS, INC.

Bell Atlantic Personal Communications, Inc., on behalf of the Bell Atlantic Companies ("Bell Atlantic"), hereby files the following Reply Comments in the above-captioned matter.[1/]

I. INTRODUCTION

In its initial comments, Bell Atlantic presented several proposals and auction design modifications[2/] intended to aid the Commission in the implementation of its recently-acquired competitive bidding authority under new Section 309(j) to the Communications Act.

In the following Reply Comments, Bell Atlantic first urges the Commission once again to maximize the participation of all qualified bidders in the PCS auctions, and in particular, to allow entities that might otherwise be restricted by the Commission's current PCS cellular eligibility rules and attribution thresholds to enter the auction process, conditioned on their achieving compliance with the Commission's PCS service rules within a

---

1/ These Reply Comments are submitted by the Bell Atlantic telephone companies -- the Bell Telephone Company of Pennsylvania, the four Chesapeake and Potomac Telephone Companies, the Diamond State Telephone Company, and the New Jersey Bell telephone Company -- as well as Bell Atlantic Mobile Systems, Inc., Bell Atlantic Paging, Inc., and Bell Atlantic Personal Communications, Inc.

2/ Comments of Bell Atlantic Personal Communications, Inc. (November 10, 1993), including Attachment, Barry J. Nalebuff and Jeremy I. Bulow, "Designing the PCS Auction" ("Nalebuff/Bulow Paper").

specified "grace period." Such an approach will maximize auction competition and promote the Commission's fundamental objective of assigning PCS licenses to their highest valued use, while also providing cellular operators with the ability and incentive to transition their extensive wireless communications expertise into the development of PCS systems.

Bell Atlantic also addresses specific design issues raised in some of the more substantive auction proposals. While Bell Atlantic's proposed auction design used the Commission's regime as a baseline, other parties also presented a variety of serious and detailed regimes for the Commission to consider. What has emerged from the record thus far and now confronts the Commission is a rather complex auction design "decision tree" which Professors Nalebuff and Bulow have summarized and use as the framework for more detailed discussion of several aspects of the auction proposals.[3/] Professors Nalebuff and Bulow provide additional suggestions for the Commission to consider in implementing the PCS auctions, and present refinements of the auction design presented in Bell Atlantic's initial comments that incorporate additional, limited elements of simultaneity into Bell Atlantic's suggested sequential auction approach.

Bell Atlantic reiterates its support for the limited nationwide combinatorial bidding the Commission has proposed. The Commission's basic plan will allow the PCS market directly and fully to express the interdependence of license values, and if the marketplace desires it, to aggregate licenses to achieve their highest valued use. Nevertheless, Bell Atlantic has grave concerns that the goal of the proposal will be turned on its head, and the benefits to consumers will vanish, if the Commission adopts some of the

---

[3/] See Barry J. Nalebuff & Jeremy I. Bulow, "Response to PCS Auction Design Proposals," ("Nalebuff/Bulow Supplement"), attached hereto.

more self-serving suggestions offered in the first round of comments. MCI, in particular, has proposed rule changes that would virtually guarantee it, and almost no one else, the opportunity to obtain a nationwide PCS system through the auction process. The public interest in permitting nationwide aggregation through the auction process will be defeated entirely if the pool of potential nationwide PCS applicants is effectively and artificially limited to a tiny number of bidders.

Finally, Bell Atlantic again urges the Commission to promote the participation of designated entities in the PCS auctions by encouraging strategic alliances between such entities and experienced telecommunications providers, including cellular-affiliated entities. Specifically, the Commission can promote this goal at the very least by waiving its present cellular eligibility and attribution thresholds for the specific purpose of encouraging the formation of consortiums that offer meaningful equity participation to designated entities.

II. THE COMMISSION SHOULD MAXIMIZE BIDDER PARTICIPATION IN THE PCS AUCTIONS

As a general proposition, the Commission should not restrict participation of any particular class of qualified entrants in the PCS auction process. The legislative history to the Budget Act notes that, in general, restricting qualified bidders from auction participation subverts the public interest by decreasing the competition for spectrum licenses and allowing them to be acquired by entities who may not place the highest value on them.[4/] Reducing the number of bidders through such restrictions also raises the risk of collusive

---

4/ "In the event that the Commission limits participation in any given competitive bidding procedure, however, there exists a significant possibility that licenses will be issued for bids that fall far short of the true market value of the license. "H.R. Rep. No. 103-111 at 257; see In the Matter of Implementation of Section 309(j) of the Communications Act--Competitive Bidding, Notice of Proposed Rule Making, PP Docket No. 93-253 (October 12, 1993) ("Auction Notice") at 28, n. 67.

behavior by providing fewer participants an increased ability to "game" the auction,[5/] renders the auction less efficient as an allocation device,[6/] and ultimately reduces the potential spectrum value recovered by the Government.[7/]

In the specific context of the PCS auctions, it is clear that the public interest in maximizing the number of qualified bidders would be undercut dramatically by the Commission's current cellular ownership restrictions if the Commission allows such restrictions to prevent cellular-affiliated entities from even entering the auction process. Other commenters that addressed this issue agreed conceptually with Bell Atlantic's position that, even considered apart from the wisdom of the PCS ownership restrictions,[8/] the Commission should not prevent cellular-affiliated entities from bidding so long as such applicants certify that, in the event they are awarded a PCS license, they will promptly bring their systems into compliance with the Commission's rules.[9/]

5/ As the Commission recognizes, the oral bidding that it has proposed as its basic auction method "may be more subject to manipulation . . . when there are few bidders." Auction Notice at 14, ¶ 38.

6/ See Nalebuff/Bulow Paper at 9 ("Allowing the largest universe of potential bidders helps maximize the efficiency of the auction process.").

7/ The Congressional Budget Office observes that "[r]estrictions on participation would probably reduce auction receipts." Congressional Budget Office, Auctioning Radio Spectrum Licenses: A CBO Study (March 1992), at 46; see also R. Preston McAfee and John McMillan, "Auctions and Bidding," 25 J. of Econ. Literature (June 1987) 711.

8/ Bell Atlantic intends to vigorously address these restrictions in detail on direct reconsideration of the PCS service rules. See, e.g., In the Matter of Amendment of the Commission's Rules to Establish New Personal Communications Services, Second Report and Order, Gen. Docket No. 90-314, 8 FCC Rcd. ____ (Sept. 23, 1993), at 45 ¶ ¶ 105-06 ("PCS Order").

9/ See, e.g., Comments of Ameritech at 2; Comments of Sprint Corporation at 7; Comments of General Communication, Inc. at 8; Comments of Nynex Corporation at 15, Exhibit 1, Harris & Katz at 23.

The FCC has recognized "that participation by cellular operators in PCS offers the potential to promote the early development of PCS by taking advantage of cellular providers' expertise, economies of scope between PCS and cellular service, and existing infrastructures."[10/] The public interest will therefore be served by providing cellular firms with the opportunity and incentive to transition to PCS in markets where they currently offer cellular service. In this regard, cellular companies will have no way to determine the value of their cellular businesses relative to PCS properties ex ante. Whatever the merits of the current cellular eligibility rules, it plainly would be unfair and unreasonable for the Commission to expect cellular firms to make this assessment in a vacuum, without being able to gauge their success in the PCS auction. By permitting such entities a reasonable period of time post-auction to come into compliance with the Commission's PCS service rules by selling one of the two properties, the problem is avoided, and the potential benefit to consumers is vastly increased.[11/]

10/ PCS Order at 45, ¶ 104.

11/ As Bell Atlantic pointed out in its initial comments, there are several ways such an applicant could come into compliance with the eligibility restrictions. The applicant could divest itself of the offending properties, as is often done in the broadcast context. See e.g., Fox Television Stations, Inc., 8 FCC Rcd 5341, 5345 (1993) (observing that "if a broadcast licensee acquires a daily newspaper in the same market, the [broadcast-newspaper cross-ownership] rule effectively provides for an automatic temporary waiver in that the licensee must dispose of the broadcast station within one year or by the time of its next renewal"). On the other hand, if the applicant concluded that the post-auction value of the cellular licenses ultimately obtained at auction did not justify divestiture of its cellular properties, it could sell the PCS license within the specified "grace period," assuming that the Commission adopts its proposal to make PCS licenses freely transferable. Because the license would be sold to the cellular carrier at full market value at auction, and the licenses would be subject to the PCS buildout requirements, cellular firms would have little incentive or ability either to speculate on or to "warehouse" PCS licenses. See Nalebuff/Bulow Paper at 8 n.10; Harris & Katz at 23.

III. AUCTION DESIGN

A. Design Proposals

Bell Atlantic's Comments proposed several ways for the Commission to simplify the PCS auctions. While Bell Atlantic's proposed auction design used the Commission's proposed regime as a baseline, other parties also presented proposals for the Commission to consider. What has emerged thus far is a rather complex auction design "decision tree" which Professors Nalebuff and Bulow have summarized and used as an overview in the Nalebuff/Bulow Supplement.

Bell Atlantic acknowledges at the outset that there is no definitive answer as to what constitutes the "optimal" PCS auction design. Indeed, in an Appendix to the original Nalebuff/Bulow Paper, the authors presented to the Commission a discussion of an efficient auction allocation mechanism, designed both to handle combinatorial bidding and to eliminate the role of strategic bidding in the auction process.[12/] Professors Nalebuff and Bulow, however, did **not** recommend that the Commission adopt this approach, observing that it is "too complicated, especially given the scale, novelty, and uncertainty associated with the PCS auction."[13/]

All auction design proposals involve tradeoffs and imperfections. Bell Atlantic has urged the Commission to adopt an auction design that retains theoretical advantages, but can be simply and practically implemented from an administrative standpoint. In this regard, several of the proposals that the Commission has received, while thoughtful, suffer from

---

12/ See Nalebuff/Bulow Paper at 25 (Appendix B). In Appendix B, Professors Nalebuff and Bulow set forth the design of the "efficient" auction, in a world of rational bidders, each with a clear understanding of the auction rules.

13/ Id. at 3.

defects similar to the Nalebuff/Bulow "efficient" auction.[14/] As has often been stated: "The best should not be the enemy of the good."

Below, Bell Atlantic critiques briefly certain features of other auction design proposals. A more detailed discussion is found in the Nalebuff/Bulow Supplement.

1. **Simultaneous Versus Sequential Auctions**

The Commission received several proposals that advocate redesigning the auctions to allow for simultaneous national and regional bidding. After assessing these proposals, for reasons set forth below, Bell Atlantic continues to believe that a sequential auction is the preferable approach. Moreover, Professors Nalebuff and Bulow have suggested refinements to the sequential auction design that will incorporate limited elements of simultaneity, improve its performance and resolve many of the objections raised in the first round of comments.

a. NTIA

The most extreme case for the simultaneous auction approach has been made by the NTIA, which argued that all of the PCS auctions should be run together, all possible combinatorial bids should be allowed, and all auctions should end simultaneously.[15/] While it is ambitious and comprehensive, the NTIA approach is impractical if not impossible to implement, especially given the short time limits and administrative resource constraints involved.

[14/] Id. at 25.

[15/] See Comments of the National Telecommunications and Information Administration and Attachment 1, Mark Bykowsky & Robert Cull, "Issues Implementing a Personal Communications Services Auction" ("NTIA Staff Paper").

First, the simultaneous, generalized combinatorial bidding featured in the NTIA proposal renders it extremely difficult for firms to bid within a budget constraint. The shifting bidding strategies necessary to respond to the ever-changing mixture of individual and combinatorial bids can create myriad scenarios where a firm ends up (unintentionally or strategically) submitting winning bids for territories that far exceed its budget.[16/] Moreover, the only practical way to alleviate the budget constraint problem is to allow the retraction of bids (or a default at some small price), which spawns additional difficulties. If the practice were permitted, bids would become a form of no- or low-cost "options to purchase," with a daisy chain effect such that no bidder would have any clue as to what was or was not a winning bid.[17/]

Similarly, the unlimited combinatorial feature of the NTIA proposal makes it virtually impossible for firms to determine the price for any individual region. The problem is that the combinatorial allocation mechanism finds the grouping of licenses that maximizes total government revenue. This leads to "group" or "package" prices, but there then is no way to break up the group price into prices for each individual license. Thus, it is extremely

---

16/ An example of this phenomenon is presented in the Nalebuff/Bulow Supplement at 6. The analysis underlying NTIA proposal is specifically addressed in more detail in the Nalebuff/Bulow Supplement at Appendix A. Note that if firms only bid up to their actual budget, they will be very limited in the number of licenses for which they can bid, and will consequently have to make difficult tradeoffs as to which licenses to seek. Although the problem is less acute with more limited forms of combinatorial bidding, the simultaneous element of the auctions makes tradeoffs even more difficult under the budget constraint. In the case of all possible combinatorial bidding, "the complications take us well beyond the frontiers of auction theory, never mind the practical problems of implementation." Id. at 7.

17/ Nalebuff/Bulow Supplement at 8. The alternative, however, is equally undesirable. If firms cannot withdraw their bids or default at little cost, they will be excessively conservative when bidding in the simultaneous auctions. Id.

difficult for bidders to determine how much they in isolation must raise their bids in order to win a license.

Finally, the simultaneous, unlimited combinatorial bidding proposed by NTIA has the appearance of offering bidders the advantage of flexibility to value and bid for their desired combination of regions, and to keep changing their strategies mid-course if it appears they will be out-bid. This benefit is illusory, particularly if firms cannot withdraw their bids. Indeed, the more probable result is that the strategically shifting, bubbling morass of individual and combinatorial bids will end up undercutting bidders' chances of actually winning regions that they desire.[18/]

The negative consequences of allowing all possible combinatorial bidding in a simultaneous auction as NTIA has proposed outweigh any benefits to the proposal. These downsides include: bidding complexity; the difficulty of obeying budget constraints; the capacity of price information feedback in the iterative rounds; and the absolute necessity for computerized bidding, which could put all but the largest bidders at a serious disadvantage.[19/]

b. Pactel, PacBell and Nevada Bell

With no or limited combinatorial bidding, conducting simultaneous auctions does offer the advantages of providing more information to bidders, and providing a certain amount of increased bidding flexibility, depending upon the scope of the simultaneity. These advantages have been identified in the proposals of Pactel, which advocates several rounds of

---

18/ "The person having the winning bid in Florida finds himself or herself stuck with a losing bid that became a winning bid. Or, they are unable to participate in other regions until the Florida outcome has been resolved, but that could be at the end of the auction." Id. at 9.

19/ Id. at 10.

sealed bids in which all geographic areas for a given spectrum block are auctioned simultaneously,[20] and Pacific Bell and Nevada Bell, which similarly advocate the daily submission of sealed bids for any or all of the licenses offered.[21]

Nevertheless, there are still significant problems with a simultaneous bidding approach. First, firms bidding in simultaneous auctions retain the incentive to bid beyond their budget in a large number of auctions in an expectation of receiving their desired number of licenses. For example, if a firm can afford to win only one MTA, and there is only a ten percent chance of the firm winning an MTA license in each of ten MTAs, the firm should enter most or all of these ten MTA auctions in order to raise its probability of at least winning one license. This raises, however, the corresponding probability that the firm will get "stuck" winning more licenses than it can afford, and the problem again requires the Commission to institute the questionable remedy of permitting firms to withdraw their bids.

In addition, simultaneous auctions also increase bidding complexity. Firms have little time to reflect on their bids because there are too many decisions to be made at once. The problem will be exacerbated dramatically once bidders seek to combine licenses across regions.[22]

---

[20] Comments of Pactel Corporation and Exhibit, R. Preston McAfee, "Auction Design for Personal Communications Services" ("McAfee"), at 15-19.

[21] See Comments of Pacific Bell and Nevada Bell and Attachment, "Affidavit of Paul R. Milgrom and Robert B. Wilson" ("Milgrom & Wilson"), at 19-27.

[22] Professors Nalebuff and Bulow estimate that bidders' need for information processing time and multiple rounds of bidding increases tremendously when licenses are combined across regions. By contrast, under Bell Atlantic's proposal to combine bidding for "identical" spectrum blocks into single sequential auctions, e.g., the A and B MTA blocks, there is almost no additional time required to process new information. Thus, "there is also some reason to doubt that there will be any time saving from creating a system of large simultaneous auctions run in sequence -- it could even end up much worse." Nalebuff/Bulow Supplement at 12.

Finally, a fundamental problem with all of the simultaneous bidding proposals is the lack of a practical stopping or "closing" rule.

Of the proposals that would have all auctions end simultaneously, the soundest rule appears to be the one offered by Professors Milgrom and Wilson -- the auction ends if no license has a bid that exceeds the previous day's bid by some stated percentage, e.g. 5%.[23/] The proposal, however, still allows for bidders to strategically engage in the low-cost delay tactic of prolonging the auction by raising their price for one low-priced BTA by just over 5% until they believe that the time is ripe to "jump in" with winning bids. If several players adopt this strategy, "the result will be confusion and a greatly prolonged auction process."[24/]

At the other extreme, NTIA proposes to end the auction "at some time, not known in advance, when bidding activity has died down." The problem with this rule is the subjective problem of determining "when bidding activity has died down." To the extent that firms must make all of their decisions immediately fearing that the auctions will close, the result becomes a kind of giant simultaneous sealed bid auction that undercuts the very purpose of allowing simultaneous bidding in the first place.[25/]

23/ See Milgrom & Wilson at 19.

24/ Nalebuff/Bulow Supplement at 12.

25/ As Professors Nalebuff and Bulow explain, the paradox is as follows:

> [U]ntil there is a threat that the auction will close, there is no advantage to bid and several reasons not to. Once the threat becomes real, then everybody has to bid all at once and the result becomes like a giant simultaneous sealed-bid auction. There is an analogy in negotiations: deadlines do wonders for getting people to compromise. What is the advantage of offering concessions while there is still no cost of waiting?

Id. at 13.

As Professors Nalebuff and Bulow explain, there are fewer closing problems with auction proposals that move away from complete simultaneity, although the purported benefits of simultaneity become more attenuated as well. The Pactel proposal, for example, avoids the pitfalls of the more extensive simultaneous auction proposals by allowing auctions to close at separate times. Because the auctions can close one at a time, there is less danger of strategically prolonging the entire auction process. The problem here, however, is that such an "endogenous" closing rule -- which allows the market to dictate the order of closing -- may well cause the "wrong" auctions to close first. It also increases the possibility of strategic manipulation of the closing order by allowing bidders to prematurely close certain regions by making high initial bids.[26/]

In sum, although there may be costs to implementing a purely sequential auction design, neither a simultaneous nor sequential bidding regime is clearly superior to the other. Bidders under a simultaneous auctions regime can never be sure they have won a license before bidding for another. A bidder in a simultaneous auction still has trouble coordinating its bids. It can still wind up with unintentional high bids that it cannot change. And, although simultaneous auctions may be quicker than sequential auctions, this is by no means clear.[27/]

[26/] Id. at 15.

[27/] See id. at 13.

c. The Commission Should Experiment With the Limited Elements of Simultaneity Featured in Bell Atlantic's Proposal

As Professors Nalebuff and Bulow observe, "the optimal scope of simultaneity is a balancing act."[28/] If the Commission chooses to experiment with a simultaneous bidding mechanism, Bell Atlantic recommends that it do so in a very limited form, such as Bell Atlantic's proposal to combine the bidding for A and B MTA blocks into one sequential auction where the high bidder gets first choice and the second bidder gets second choice, or by adopting the basic proposal of Telephone and Data Systems ("TDS") and Professor Weber, which is quite similar in spirit.[29/] Both regimes share the benefit of minimizing strategic behavior and the possibility of bidders "outsmarting themselves" by attempting to game the sequential bidding of various spectrum blocks. The proposals also shorten the sequential auction time by some 60%-80%, severely muting one criticism of sequential auctions.

Professors Nalebuff and Bulow have also suggested ways in which the Bell Atlantic proposal can be streamlined even further by adding two additional, limited elements of simultaneity. Contrary to the view of some commenters, Bell Atlantic's proposal will neither "rush" the PCS auctions, nor require an unreasonable time period to complete.[30/]

[28/] Id. at 4.

[29/] Professor Weber has proposed that the Commission hold simultaneous auctions for the A and B blocks within an MTA, simultaneous auctions for the C and D blocks, and simultaneous auctions for the E, F, and G blocks within a region. See Comments of Telephone & Data Systems, Inc. & Attachment, Robert J. Weber, "Comments on FCC 93-455: Notice of Proposed Rule Making: A Proposed Auction Methodology for the Allocation of PCS Licenses" ("Weber"). TDS and Weber disagree with Bell Atlantic on the Commission's proposal to allow nationwide combinatorial bidding, which Bell Atlantic supports.

[30/] See Reply Comments of Pactel Corporation, Exhibit, "Auction Design for Personal Communications Services: Reply Comments," R. Preston McAfee (November 22, 1993), at 6.

Bell Atlantic currently has proposed running a total of four series of sequential PCS auctions by (1) consolidating the bidding for A and B blocks within each MTA into one auction where the MTAs are auctioned sequentially; (2) running the C and D designated entity blocks within each BTA as separate sequential auctions; and (3) consolidating the E, F and G blocks within a BTA into one auction and then auctioning the 488 BTAs sequentially. This proposal radically reduces the number of separate PCS auctions from the number currently proposed by the Commission. It is possible to combine the auctions even further, by running the C and D designated entity auctions simultaneously with the combined E-F-G BTA auction. This would reduce the auction time by almost 80% while still giving bidders a reasonable amount of time between auctions.[31/]

In addition, by using the Japanese bidding format[32/] that Bell Atlantic has proposed in conjunction with overlapping bid sequencing for the individual MTAs, Professors Nalebuff and Bulow have proposed a schedule that guarantees that all MTA licenses would be sold in **two weeks**. Proceeding from large MTA licenses to small, the bidding for the largest MTA markets would be spread out over 4-5 brief sessions lasting a total of 2-3 days. Aided by the Japanese auction format, the Commission would end each bidding session when there are only a certain number of bidders left, providing the bidders

---

31/ See Nalebuff/Bulow Supplement at 17.

32/ In this variant of the English auction, all bidders start in the auction and may quit at any time. At each price, all bidders that are willing to pay the price signal their indication, either by raising their bidding cards or electronically. Thus instead of asking for bids as in "I hear 10, do I hear 20?..." the auctioneer asks all parties willing to pay the current price to continue holding up their bidding cards. The auctioneer continues to raise the price by fixed increments until only two bidders are left (in the event of selling two licenses). Once a bidder drops out, he or she cannot re-enter. The Japanese-style auction is discussed in detail in the Nalebuff/Bulow Paper at 12, 16. Professors Nalebuff and Bulow have suggested further modifications of this auction, such as the use of clocks and LED board displays. See Nalebuff/Bulow Supplement at 33.

with adequate opportunities to consult with top management during the auction in determining how to bid. The Japanese auction format particularly facilitates this result by helping the Commission maintain control over the process by giving it a sensible way to interrupt and then restart the bidding. Moreover, by overlapping the bidding in the manner described in more detail by Professors Nalebuff and Bulow, the MTA licenses can be auctioned off in a short, but reasonable, timeframe.[33/]

2. **Combinatorial Bidding**

Bell Atlantic supports the Commission's general concept of using a combinatorial or "group" bid for MTA licenses, followed by an open auction. This limited form of combinatorial bidding will allow the PCS market directly to express the interdependence of license values, and if the marketplace desires it, to aggregate licenses to achieve their highest valued use.[34/]

The Commission's current proposal is to provide for the possibility of rapid aggregation to nationwide PCS systems without pre-ordaining this outcome.[35/] Specifically, the Commission has decided to let the market itself dictate the optimal bundling of PCS licenses by allowing bidders to convey directly through the auction process the interdependence of license values. This approach has distinct advantages. As CTIA's auction expert observes:

[33/] See id. at 27-33.

[34/] See Auction Notice at 10, ¶ 57; see also Issac at 8.

[35/] To the extent that the Commission has decided that it will ultimately allow licensees to consolidate regions to form a national network, it makes little difference whether this is accomplished through the auction or through the aftermarket.

> Regardless of which manifestation of combinatorial bidding one considers, there are some important common attributes which should be emphasized. Combinatorial bidding allows bidders to express their combinatorial values; bids can now more accurately reflect the valuation of different combinations of goods at auction . . . The market becomes the mechanism for determining the combination of goods. As the Rassenti, et al. auctions demonstrated, this makes it more likely that exchange efficiencies will be captured in the auction and not delayed until an after market. another advantage of combinatorial auctions is that bidders can assign values (and hence bids) with greater certainty.[36/]

Congressman Dingell has expressed a similar view of the advantages of combinatorial bidding, noting that such an approach "replicates for the Government the market combinations that otherwise would have led to transactions in the aftermarket."[37/]

Some parties have objected that combinatorial bidding will introduce unnecessary complexity into the bidding process. In addressing this concern, it is important to be analytically precise about the nature of the combinatorial bidding that the Commission has proposed.

Bell Atlantic agrees with those commenters that object to the imposition of a complete system of combinatorial bidding at this time, i.e., a system allowing bidders to bid on any subjective grouping of licenses that they wish. This would rapidly become an administrative nightmare. As Professor Issac observes:

[36/] Issac at 8 (emphasis in original); see Comments of the Cellular Telecommunications Industry Association at 10-13.

[37/] Letter of the Hon. John D. Dingell to The Hon. James H. Quello, Chairman, Federal Communications Commission (Sept. 21, 1993). To the contrary, Telocator urges that "to the extent that there is any argument that national systems are the optimum means of providing radio services, such systems are better achieved through market forces." Comments of Telocator, the Personal Communications Industry Association at 6-7. This position makes no sense because allowing "market forces" to determine the efficient consolidation of licenses is precisely what the advantage and purpose of a combinatorial bidding approach, with the added benefit that the Government recovers what would otherwise be aftermarket transactions costs directly through the auction process.

> Combinatorial auctions are not well known . . .[and] the mathematics of the complete combinatorial bidding gets very complicated very quickly. Complexity in this context raises a number of concerns, including difficult and controversial implementation, difficulty in formulating bids, discouraging of potential (especially smaller) bidders, and potentially less efficient outcomes. The FCC's proposal is a simple but appropriate and important first step to introducing and evaluating combinatorial auctions in this process.[38/]

The FCC has proposed to adopt a limited combinatorial approach that is in keeping with the service regions that the Commission considered in the PCS proceeding, and (at least for now) it should limit combinatorial aggregations to those regions -- BTAs into MTAs, or BTAS or MTAs into nationwide service areas. Bell Atlantic also has proposed an approach to simplify the Commission's limited combinatorial approach even further by combining the regional auctions for the MTA licenses.[39/]

Given the Commission's proposed limitations on combinatorial bidding, and the fact that the process can be simplified even further, there is little room to argue that

---

38/ Issac at 12. Similarly, Professors Nalebuff and Bulow characterize an unlimited combinatorial approach, especially when combined with simultaneous bidding, "has a potential for disaster." Nalebuff/Bulow Supplement at 5.

39/ As Professors Nalebuff and Bulow observe:

> Combining the regional auctions also makes the combinatorial bidding simpler. Consider the bidding for a national license. Instead of two sealed bids, one for the A license and one for the B license, firms make only one sealed bid. After the regional bidding is over, the FCC would evaluate the national bids. Two national licenses would be awarded if and only if the top two national bids exceed the sum of the top regional bids. (The high bidder would get first choice.) If two national bids do not exceed the sum of the highest regional bids then one national license would be awarded if the highest national bid exceeds the sum of the second-highest regional bids. The winning national bidder would get first choice if this winning national bid exceeds the sum of the first-highest regional bids; otherwise the national bidder would get second choice in each region.

Nalebuff/Bulow Paper at 7 (footnote omitted). Professors Nalebuff and Bulow have presented a variant on national combinatorial bidding that appears to solve problems that commenters have raised with the Commission's sealed bid approach. This is discussed in more detail below.

combinatorial bidding under such circumstances is unduly complex. This is especially true in light of the benefits that such an approach can bring in assigning PCS licenses to their highest valued use.

3. Proposed Variant of Commission Proposal for Nationwide Combinatorial Bidding

Professors Milgrom and Wilson have described a perceived "bias" in the Commission's national sealed-bid auction proposal allegedly favoring the combinatorial bidders, based upon a "free-rider" problem among the bidders for the regional licenses. They claim that under the Commission's current proposal, it is possible for national bidders to win in scenarios in which they do not in fact value a nationwide system more than the regional bidders. This is because successful regional bidders win their regions by bidding only slightly more than the second-highest regional bids, and not by bidding the full value of the license to them (which might be considerably more). National bidders therefore conceivably could win a national license by bidding only slightly more than the sum of the second-highest regional values, even though the sum of individual MTA winning bidders valued the regions more. Although each bidder could, by bidding more than the minimum required to be the high bidder in his own region, contribute to the likelihood that a national bid would be defeated, each regional bidder has incentives to let this burden fall on other contributors. Thus, the claim is that the "free rider" problem works to limit the possibility that the sum of the regional bidders' aggregate bid will defeat a national bid.

At the outset, this claim involves a second-order effect whose ability to "bias" the outcome in favor of national bidders is likely to be diminished by other factors. As Professors Nalebuff and Bulow observe, "even taking the Milgrom and Wilson line of argument, there is reason to suspect that the national bidding will lose to the regional bidding

unless there are real economies of scale and scope."[40] Professors Nalebuff and Bulow have identified a countervailing "winner's curse" effect that disadvantages the national bidders vis-a-vis the regional bidders. If they are rational bidders, national bidders' fear of the "winner's curse" will cause them to bid conservatively in a sealed-bid auction (as compared to the subsequent open regional auctions), making it increasingly unlikely that their national bids will exceed the sum of the regional bids.[41]

CTIA has proposed opening the sealed national bids before conducting the regional auctions. Professors Nalebuff and Bulow take this approach a step further and propose running the national bidding as a Japanese-style open auction. As Professors Nalebuff and Bulow explain, adopting this proposal for national bidding would accomplish several objectives. First, it reduces the "winner's curse" effect and allows people to bid more rationally for national licenses in an open bidding format. It also provides even more information before the start of the regional PCS auctions than the CTIA proposal, which will allow everyone to learn a tremendous amount about the value of PCS licenses.[42]

Most significantly, running an open Japanese national auction before the regional auctions limits the ability of national participants to bid above the second-highest valuation (since under a Japanese auction a firm cannot raise its own bid). By restoring the

---

[40] Nalebuff/Bulow Supplement at 25.

[41] Id. at 20-21.

[42] See id. at 22-26.

symmetry of bidding, this resolves the "bias" identified by Milgrom and Wilson, and solves the "free-rider" problem.[43/]

While no system is perfect, the Commission should implement this auction design for the combinatorial/regional bidding. It is simple variation on the Commission's design that cures several of the concerns raised in the initial round of comments.

4. Nationwide Combinatorial Bidding for PCS Licenses and the MCI Proposal

Although Bell Atlantic endorses combinatorial bidding, it has serious reservations about the interplay between combinatorial bidding and the Commission's present PCS eligibility and attribution rules. The Commission's proposal becomes meaningless if one bidder is effectively guaranteed a windfall because the Commission's regulatory structure has illogically and arbitrarily eliminated other competitors. Unfortunately, such an outcome appears to be possible.

As Bell Atlantic noted in its initial comments, the pool of entities with access to enough capital to aggregate licenses and ultimately build out a nationwide PCS system is limited from the start. The Commission's current eligibility restrictions winnow this pool

---

[43/] Professors Nalebuff and Bulow observe of the Japanese auction setting:

> [N]either side [i.e., the national nor regional bidders] has the incentive to take into account the effect of their bid on increasing the chance that national or regional bidding will win a license. Each side's winning price is determined by the second-highest valuation which is contingent on winning the license. The situation where these problems arose was in the case of sealed bidding where the bidders are allowed to go above the second-highest valuation in the sealed bid. By getting rid of that asymmetry, we eliminate the free rider problem, put the national bid at the second-highest price and solve the Milgrom and Wilson bias, provide information about the value per POP that should help mitigate Nynex's concern about having New York be the first regional auction, provide more information during the national bidding to help prevent irrationality and the winner's curse.

Id. at 25 (emphasis in original).

even further by effectively eliminating most major cellular companies and LECs from participating in nationwide bidding. The condition is worsened still by the Commission's attribution rule set forth in the PCS Order concerning the percentage of permissible cellular ownership in a PCS licensee. The rule is, at best, unclear, but may be read to limit the pool of applicants by setting the attribution limit on cellular ownership in a PCS licensee at a threshold of 5%.[44/] The effect of this interpretation would be to limit the bidders in the national MTA auctions to a very few.

In this regard, the comments filed by MCI in the initial round of this proceeding are a particularly egregious case of self-interest masquerading as public policy. The goal seems simply to guarantee that an MCI-led consortium is the only eligible entity able to apply for and win a nationwide PCS license. Specifically, MCI would:

(1) Impose even more onerous and nonsensical ownership restrictions on cellular operators by seeking categorically to exclude non-dominant cellular providers from bidding on the 30 MHz MTA "A" block, both in and out of region.

(2) Design the nationwide combinatorial auctions to be run as "sealed second-bid" auctions.

(3) Conduct the MTA auctions as follows: 1) Run the "A"-block nationwide sealed-bid auctions; 2) conduct an oral open "A"-block auction for individual regions; 3) conduct sealed-bid "B"-block auctions; 4) conduct open bidding for block "B" in individual regions; 5) open all sealed bids that have not been withdrawn. (If combination bids win in either band, MCI would allow that entity to withdraw any MTA winning bids in the other band.)

(4) Disallow cellular carriers from entering auctions at all in areas where they are currently ineligible, even if they pledge to divest themselves of their cellular properties upon entry into the auction.

[44/] Bell Atlantic believes that such an interpretation is both incorrect and contrary to public policy. This attribution rule will also be addressed by Bell Atlantic on reconsideration of the PCS Order.